

REPLACEMENT ABSTRACT

ABSTRACT OF THE DISCLOSURE

A solid oxide fuel cell is provided. The solid oxide fuel cell includes a cathode, at least an electrolyte membrane, and an anode having a ceramic material and an alloy of nickel and at least a second metal, selected from aluminum, titanium, molybdenum, cobalt, iron, chromium, copper, silicon, tungsten and niobium, the alloy having an average particle size not higher than 20 nm. The provided solid oxide fuel cells shows enduring efficiency when fuelled with different fuels, including hydrogen and hydrocarbons, in a wide range of operating temperatures.